

# PATENT ABSTRACTS OF JAPAN

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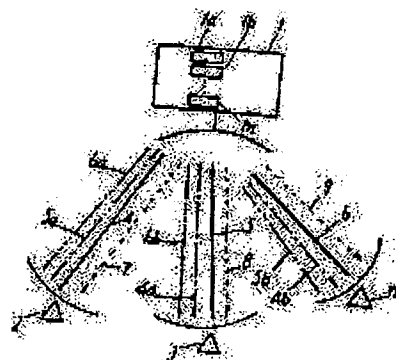
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## (54) TRANSMISSION POWER CONTROL SYSTEM FOR SATELLITE COMMUNICATION

### (57)Abstract:

**PURPOSE:** To compensate precipitation attenuation by a fixed quantity and to attain a satellite communication system to be operated by plural ground stations can be operated by the plural stations by detecting satellite receiving power data at every incoming line frequency from the plural stations and transmitting the data to each ground station.



**CONSTITUTION:** In order to transmit signals for communication from a ground station 2 to ground stations 3 and (n) satisfying a prescribed channel quality, the transmission power is controlled by calculating precipitation attenuation quantities of incoming channel 4-6. Namely, a satellite reception power detection circuit 1a sends back the detecting data of the satellite reception power when it rains at the incoming channel 4 to the ground station 2 after superposing the data upon telemeter signals and performing frequency conversion. The ground station 2 calculates the precipitation attenuation quantity by comparing the sent satellite reception power when it rains at the channel 4 with already known data of fine weather and transmits the signals for communication to the stations 3 and (n) by increasing the effective radiation power of the station 2 by the attenuation quantity. Similar transmission power control is performed based on detecting data transmitted from satellite reception power detection circuits 1b and 1n when it rains at the incoming channels 5 and 6 of the ground stations 3 and (n).